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OF THE

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TEXT BOOKS FOR THE DEAF AND DUMB.

[THIRD ARTICLE.]

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Having, in our former articles, indicated the kind of books which would, in our opinion, furnish adequate and proper materials for instruction in language, we conclude our paper upon text books, by passing to the second grand division of the work, and specify the principal aids desirable in the shape of

TEXT BOOKS IN GENERAL KNOWLEDGE.

As already stated, we deem a special series of this kind necessary: first, because common school books contain either too little or too much for the young deaf-mute; secondly, because they are unsuitable in style and arrangement; and, thirdly, because of the inconvenience and loss of time in adapting them to our peculiar wants.

The secrets of a really good school book are judicious omission and practical arrangement. In preparing such for the deaf and dumb, the objects aimed at should be: 1st, to save time; 2d, to obviate mere mechanical drudgery; 3d, to give just so much information as is absolutely indispensable, neither more nor less; 4th, to give the maximum of information in the minimum of space; 5th, to present it in a form striking to the eye, and capable of being conveniently memorized; 6th, to

make each book literally a text-book, or collection of texts, a repertory of topical sentences, to be amplified by the teacher at discretion.

On these principles then the following should be constructed:

I. Course of Religious Instruction.—1. An elementary Course embracing: (1.) Names of prominent Bible characters, the leading facts of which to be communicated by signs, and in connection with a series of large sized prints illustrative of the most interesting scenes and events in Scripture history. (2.) Rudimentary ideas of the being and attributes of God, in short easy sentences. (3.) Of the soul and its nature. (4.) Moral and religious duties. (5.) Questions on the foregoing. (6.) A primary Catechism of Scripture History of the simplest kind. (7.) A second course, somewhat more extended, following the narrative instead of the catechetical form, giving the important facts in a series of simple propositions, easily committed to memory. (8.) An Elementary Catechism of Revealed Religion, in easy questions and answers, also numbered. (9.) The Lord's Prayer, the Ten Commandments abridged, as in Mr. Jacob's "Primary Lessons," with a few short forms of simple Prayers and Graces adapted for young pupils. (10.) The interpretation of the same in printed signs. (11.) All the questions of the foregoing catechisms collected at the end without answers, as an exercise for the pupil, grouped, first, in the order in which they actually occur, and, secondly, according to the similarity of their forms, e. g. questions beginning with Why? How? Where? How long? &c., to be arranged under these heads respectively.

II. Advanced Course.—(1.) Important passages of Scripture to be committed daily to memory. (2.) The Lord's Prayer, the Creed, and Ten Commandments in full. (3.) Passages of Scripture respecting the deaf and dumb. (4.) The Miracles of our Saviour and his Apostles in chronological order with references to book, chapter and verse. (5.) The parables arranged in the order of their comparative difficulty, with the requisite references. (6.)

Course of select Reading Lessons from the Old and New Testaments, with suitable explanations of all difficult words and phrases, the text not to be reprinted, but read from the Bible itself; the title of the lessons, reference to where found, and explanations of words only to be printed. (7.) Course of lessons on the Duties, Doctrines, Promises, &c., of religion, expressed in the very words of Scripture, with the proper references. (8.) Course of Questions on the foregoing.

III. Book of Common Things and Object Lessons, supplying for the deaf-mute that elementary, every-day knowledge with which children are familiar even before they go to school, in the form of question and answer, to be used in connection with a cabinet of objects. The questions to be reproduced at the end, without the answers, for examination purposes.

IV. Natural History.—A concise course of interesting lessons, illustrated with cuts, on the plan of the admirable "History of Animals" in Part III. of Dr. Peet's Course of Instruction, with questions appended.

V. Arithmetic.—Embracing Numeration, the four Simple and Compound Rules, Bills of Parcels or Accounts, Tables of Money, Weights and Measures, with copious practical exercises, and rigid attention to the gradation of difficulties. For example, in Simple Addition the exercises should be arranged on what is known as the "Principle of Seven Varieties," illustrating the use and power of the cipher in connection with the digits in the notation of arithmetical periods.* To initiate the pupil also into the mysteries of "carrying," the examples should be framed to illustrate successively the operation of carrying 1 to the next line, then carrying 2, then of 3 and so on. Sufficient examples should be given under each rule to furnish both the kind and amount of practice required, with the generality of pupils, to make them quick and accurate arithmeticians, irrespective of the extempore exercises that may be given, over and

* Note.—This is admirably done in the first Book of Arithmetic in Nelson's school series.

above, by the teacher. Especial care to be taken in the questions to group and exemplify properly the various terms and phrases peculiar to arithmetic, so as to observe the pupil's progress in language. The book should not be encumbered with verbal rules, explanations, or demonstrations. These can be best added by the teacher himself. It should be simply a manual for practice.

VI. GEOGRAPHY. A manual giving such a general idea of the pupil's own country and the most important places on the globe, as he will be likely to remember should his school term unfortunately be cut short by domestic or other circumstances, (which not unfrequently interfere with the completion of the deaf-mute's education); a manual which may at the same time prepare him for studying with advantage a more systematic and advanced course, should time permit. It might embrace: (1.) A list of Geographical Terms and Phrases, illustrated by cuts, diagrams, and printed signs, but without verbal definitions or explanations. (2.) A few general ideas of the globe, its shape, size, productions, people, grand divisions of land and water, &c. (3.) A brief outline of the pupil's own country in the form of question and answer. (4.) Places that we often hear or read of, their distances from home, ways of getting to them, what noted for, &c., in a series of short sentences to be committed to memory. (5.) Places mentioned in the Bible. (6.) Comparative sizes of places. (7.) Leading countries and capitals. (8.) Colored maps containing the places mentioned in the text-book, and none else. Also cuts representing scenes and places of interest, national features, costumes, manners and customs, &c. (9.) Questions on the whole.

BIOGRAPHY, HISTORY AND CHRONOLOGY. A concise, handy book embracing: (1.) Short biographical sketches (numbered for reference) of eminent persons in ancient and modern times, with portraits and other illustrations; the names being selected according to their interest for the deaf and dumb rather than in chronological order. (2.) Classified lists of the same, under heads of " War-

riors," "Statesmen," "Philanthropists," etc., with reference to page and number of sketch. (3.) Chronological list of the same, with dates of birth and death. (4.) Alphabetical index to the same. (5.) Chronological tables of grand epochs and events in sacred and profane history, printed in colors. (6.) Outlines of British and American history and chronology. (7.) Tables of leading dates in general history, classified under heads of "Battles," "Sieges," "Inventions," "Discoveries," "Conquests," "Revolutions," etc. (8.) Outlines of Heathen Mythology. (9.) Examination Questions.

The whole so arranged as to form convenient and suggestive texts for the teacher to expand, and resting points for the memory of the learner.

In addition to the foregoing, every school should include in its apparatus the following:

PICTURES, CHARTS, DIAGRAMS, etc., on a large scale for hanging round the walls, or before a class, to save time and trouble of writing the same lesson over and over again on the black board.

1. The Manual Alphabets, single and two-handed, mounted on large sheets, from which a whole class of beginners could learn the letters at once.

2. The Primary Book in Language, already mentioned, printed in bold type, capable of being read by a whole class at a time.

3. Illustrations of all important scenes and events in Bible history, in style of Varty's Preceptive Illustrations of Scripture, and the prints published by the London Tract Society, to be used as subjects for the daily morning and evening Bible lesson.

4. Selection of Scripture Texts, in bold type, for similar purpose.

5. Colored Illustrations of Animal and Vegetable Kingdoms, Natural Scenes and Phenomena.

6. Cabinet of objects natural and artificial, for object lessons.

7. Illustrations of Trades and Occupations.

8. Colored Illustrations of the various races and nations of mankind, their costumes, manners, customs, etc., to be used in connection with Geographical lessons.

9. Maps, Globes, Geographical and Astronomical Diagrams.

10. Orrery or Planetarium, showing position and motions of the Solar System.

11. Famous scenes, battle fields, structures, etc., to illustrate the historical lessons.

12. Historical Charts, in colors, showing different periods, epochs, etc.

13. Charts of Bible Chronology, on the plan of Mr. Baker's.

14. Arithmetical Tables, Addition, Subtraction, Multiplication, Division, Money, Weights and Measures, with exercises thereon.

15. Set of Weights and Measures, Dumb Clock for teaching the hours, minutes, etc., also some contrivance for teaching days, weeks, months, etc.

16. Grammatical Paradigms, on large sheets, for class instruction.

17. Grammatical Symbols, in similar style, illustrating various forms of construction, to facilitate dictation exercises in composition.

18. Articulation Lessons, in large sheets.

19. Illustrations of Natural Philosophy.

20. Electrical Machine, and other apparatus for simple and interesting experiments, etc.

In the preparation of the course of text-books, charts, etc., above outlined, all the resources of the printer's and engraver's art should be laid under contribution to secure every possible advantage that clearness, boldness, attractiveness, and variety of typographical arrangement and color, or pictorial embellishment can lend to lighten the teacher's toil and smooth the rugged path of the deaf-mute's educational progress.

It only now remains, in conclusion, to point out the way in which the proposed series may be secured.

It is evident that such an undertaking must involve enormous labor and expense, it seems superfluous to add, beyond the resources of any single individual. No one man could be expected to produce a series to satisfy all the requirements of the case, still less to bear the cost of publication. The enterprise can only be achieved, if at all, by the united efforts of all who are interested in the object. The hearty co-operation of the instructors and friends of the deaf and dumb in Britain and America could we believe, accomplish it; otherwise, the project is Utopian and hopeless.

We would suggest that the American teachers take up this matter at their next convention, and deal with it as its importance demands. The first requisite is "the sinews of war;" the second, *modus operandi* in the preparation of the course. These two questions should be fully discussed and some practical plan of operation determined upon.

A central fund might be raised by appeals to Legislative and private benevolence, out of which the cost of a tentative series might be defrayed. The books, etc., to be prepared by a committee of the ablest and most experienced minds in the profession in America and Great Britain. Each member of this committee to prepare some one work, to be examined by the rest respectively —the results of their individual labors, their notes, comments, suggestions, etc., to be laid before the whole, carefully collected, digested, and embodied in a complete form for the approval of the associated teachers. A *sine qua non* of every text-book submitted for adoption to be, that it has been subjected to the practical test of the classroom—not merely elaborated in the theoretical seclusion of the author's study.

The successful working out of the plan, thus roughly sketched, would of course involve years of anxious, laborious, and united effort, but no great public end was ever gained without these, and the object is one of paramount importance, worthy of the energies of the friends of deaf-mute education.

We have thus endeavored, however in imperfectly, to accomplish the purpose with which we set out—to perform a task undertaken in response to the request of the respected Editor of this journal. We have dwelt on the disadvantage and the causes of the lack of text-books, pointing out the unsuitableness of common school books to our peculiar wants, and the consequent necessity of a special series. We have also attempted the outlines of the kind of helps to be embraced in such a series, and indicated the means by which they may be secured.

We cannot hope to have succeeded, in our essay, to the satisfaction of our readers where we have failed to satisfy ourselves. Imperfect and one-sided views may have been presented, and points of importance omitted, overlooked, or superficially treated. We do not presume to have handled the subject as its merits require. Nevertheless, if our remarks shall prove in any measure instrumental in leading to the realization of the subject contemplated, we shall feel that our labor has not been in vain.

SCHOOL-ROOMS AND SCHOOL FURNITURE.

BY H. W. MILLIGAN, M.D., JACKSONVILLE, ILL.

The efficiency of a school depends in a great measure upon the fitness of the school-room and its furniture. If the room is inconvenient or ill ventilated, or if the furniture is not adapted to the use required of it, the progress of the pupils will be less than it should be under different conditions. The subject therefore is of the highest importance to those interested in the instruction of deaf-mutes.

The principle which should govern us in the discussion of this subject is the benefit of the pupils. For this end buildings are erected, persons employed, and appropriations made; and, in all doubtful or disputed points, the test question should be: "which is best for the pupils?"

If two courses of action should ever be equally beneficial, that one which is most economical and imposes the least burden on the State is the one which should be adopted.

Benefit to the mutes, and economy in expenses, then, are the two principles which will assist in deciding all questions relating to our subject.

In speaking of school-rooms, the situation, shape, size, material, and color of the room are to be considered. The means of obtaining light, heat and ventilation are also to be treated of. After these points have been discussed, the proper furniture of the school-room will be considered, as seats, desks, and slates, with their appendages, to-wit: frames, pencils or crayons, sponges, rags or rubbers.

1st. The situation, shape and size of school-rooms:

Both on account of benefit to the mutes, and for economy, the school-rooms should be in a building specially appropriated to purposes of instruction. This, however, is a matter seldom left entirely to choice, as, in this country, most of the institutions were built in sections and at different times, and hence the school-rooms are generally disposed in a highly miscellaneous and wonderful manner. In a large building where there are a number of school-rooms, it happens, unavoidably, that some are more favorably situated than others. The situation of a room is more or less desirable according as its surroundings are agreeable or otherwise. A room which receives the flavors of the kitchen is more grateful under some conditions than others. The surroundings of special localities cannot be treated of here, for every room has a neighborhood of its own. So far as the light, or warmth, or ventilation of the school-room is affected by situation, those subjects will be spoken of under their proper heads.

As to situation, so far as ingress and egress are concerned, it is desirable that pupils of different sexes, coming into school, should not have an opportunity to meet until they reach the door of the school-room. The

school-rooms of the Pennsylvania Institution, admit of a still better arrangement than this. In that Institution, each room is provided with a door on opposite sides of the room. One of these doors communicates with the girls' halls on one side of the school building, while the other opens into the boys' halls (in different stories) on the opposite side.

In case of fire or other accident to the building containing two hundred or more deaf pupils, two ways of exit might be the means of saving many lives.

The best shape for a school-room, where the class does not exceed twenty in number, is probably that of a parallelogram. The teacher's slates should be at one end of this room, and the pupils should be seated in ranks of four facing the teacher and as near as convenient to him. This arrangement brings all the pupils sufficiently near to see what is on the teacher's slates, and also to see his explanation. If the desks accommodate two pupils each, and a passage of at least five feet is left between the two tiers of desks, this arrangement will enable all the pupils to see the teacher without changing their seats.

If the teacher's slates are on one side of the parallelogram, although the view of the pupils may be less obstructed by each other's heads, yet as the teacher turns one way or the other, those on the extreme right or left will be troubled to see his explanations. The light also from one side of the room will almost invariably be reflected from the teacher's slates into the eyes of the pupils seated on the opposite side. This will necessitate a changing of seats by some pupils, which should always be avoided if possible.

The size of the school-room will be determined by the number which is expected to occupy it. The two important points to be considered are, convenience and plenty of air. To satisfy both these requirements a room should be not less than fifteen by twenty-five feet, with ceiling of twelve feet in height. This will afford sufficient space for twenty pupils, and with proper means of ventilation will allow a suitable amount of air for respira-

tion. If the room is much larger than this, it will take too long a time as well as too much fuel to warm it. It will also be more difficult to thoroughly change the air of the room in the course of a few minutes, which is sometimes necessary to be done.

2d. The color and material of school-rooms:

The color of the walls should depend on the amount of light in the school-room. If the light is very strong, the walls may be advantageously tinted with green or blue colors, which are less fatiguing to the eye than a dead white wall. Observations of physicians and physiologists who have made the study of the eye a specialty, show that these colors are less severe than others upon weak or over-strained eyes. The blue of the sky and the green of the earth suggest that the observation of man is but the human expression of a wisdom older than ours. The contrast between the pure white walls of our school-rooms and the row of black slates leaning against them is fatiguing to sound eyes, and tends to inflame those which are already weak. On the other hand, the contrast between a properly tinted wall and the slates would be agreeable rather than otherwise.

The best material for ceiling and walls of the school-room is probably common plastering covered every year with a fresh coat of whitewash. The fresh lime thus applied not only neutralizes any offensive or unhealthy matter which may adhere to the wall, but counteracts and corrects any unhealthy influence which may proceed from other objects in the room.

In rooms intended for young pupils it is well to have the spaces under the windows ceiled up, as the plastering is liable to become soiled or broken by contact. This ceiling should be of pine, maple, oak, or some light colored wood, rather than of black walnut or wood of a dark color. This wood should be oiled to bring out the grain but not varnished, as on varnish, a scratch shows a white mark. The doors, window-sash, and window casings should also be of the same materials, and the same finish.

The materials of the ceilings of the room, as well as the manner of putting it on, may be spoken of here. It is not unfrequently the case that a large piece of ceiling falls to the floor, endangering the lives even of the pupils. Such an accident can happen only on account of the carelessness or ignorance of the plasterer. If the laths are nailed on so as to leave suitable spaces between them, and the mortar is properly tempered, the plasterer can apply it and should apply it so that there shall be as much mortar on the upper side as on the under side of the lath. The mortar should penetrate every space between the lath and then curl over and clinch itself. Then, as the mortar hardens, it is fastened to the lath, from which nothing less than an earthquake will dislodge it. But, in order to save time and mortar, the work is frequently hurried over. It is wonderful sometimes that the plastering sticks until the workmen leave the building.

Plasterers sometimes, to save expense, leave hair out of their mortar. A durable ceiling should always have a certain quantity of hair in the mortar to increase its adhesiveness. A private person would not accept a building from a contractor who had omitted this necessary ingredient from the walls.

Floors may be of the usual materials, but they should be painted. Ochre is as good a paint as any, and not more than one-third the cost of lead paints. There should be three coats of paint applied to floors. The first coat should consist of little more than oil. The second coat should be of thin paint, and the third should consist of paint of the ordinary thickness. Applied in this way to a thoroughly seasoned floor, oil and paint will penetrate deep into the wood, preserving it, and preventing the paint from scaling off.

The benefits of a painted floor are that dirt can be swept up without the frequent moppings which are necessary in order to keep clean one that is unpainted. The discomforts and dangers of a floor damp from recent

mopping, are by no means to be despised by those interested in the occupants of such a room.

Unless light can come from the top of the room, it should come from the end opposite the teacher. This is desirable for two reasons—1st, The light falls directly upon the objects which need illumination—viz: The matter on the teacher's slates, or the pantomime of the teacher; and 2nd, the light comes from behind the pupils, and their eyes are not dazzled by its direct rays. Are not weak eyes aggravated more often than we generally suppose by light either too bright or improperly introduced into the school-room? The above reasons are sufficient explanation why the light should not come from the end of the room where the teacher stands. If the light is introduced from one or both sides of the room the rays reflected from the teacher's slates will be sure to meet the eyes of some of the pupils, making their seeing difficult or impossible.

3d. Heating and ventilation:

A desirable plan for heating a building or even a room, and at the same time securing suitable ventilation, has yet to be proposed. Two different systems of heating have been introduced. One of these depends on heating the air in the room by contact with hot metallic surfaces. By the other system heated air is forced into the room. That system which affords the desired temperature, and, at the same time changes the air the least from its normal condition, is the best one. It is impossible to decide which heater is best, except by trial. That one which should prove best for one Institution might be the very poorest for another one. Such a contingency as the height of a chimney, or the arrangement of the rooms, or the direction towards which the building fronts, or the number, size, and position of surrounding objects, or the relative situation of the furnace, may on trial, determine the matter in favor of one or the other heater.

After securing a desirable temperature, the main point which should govern the decision respecting a choice of heaters, is, that the air should be furnished with its na-

tural constituents, as nearly as possible, in their normal amount and condition. The dryness of air furnished by most heaters, causes evaporation from the skin, mucous membranes of the eyes, fauces, throat, and lungs of pupils in our schools, predisposing them to inflammations of those surfaces. If it is impossible to heat air without at the same time drying it, why should it not be passed over a water surface after it is heated and before it is introduced into the rooms? Better still, why could it not meet a jet of steam which would supply all necessary moisture? If this is possible, it would supply a very desirable warmth which would neither warp the woodwork, nor dry up the pupils.

The subject of ventilation rivals in its perplexities the northwest passage, or the perpetual motion; no two persons agree as to its details. The causes of so great diversity of opinion I imagine to be the great effect which external temperature, direction of wind, hygrometic condition of atmosphere, and perhaps other causes, have upon ventilation. Let us see what is determined respecting this subject. Air in a room is changed by respiration. Some of this changed air is light, and rises towards the ceiling. Both the light and the heavy are unfit for breathing again. How shall they be disposed of?

Let there be an opening like a fire-place near the floor communicatiing with a chimney flue. Let there be another opening near the ceiling not less than 18 inches square, closed by a register and communicating with the same air flue. This register should be closed while the room is being filled with warm air. Let there be the same conveniences and fixtures at the opposite end of the room. Then, if the wind is in one direction, the impure air, both light and heavy, will escape from the opposite flue, and *vice versa.*

Heating and ventilation should be designed by the same mind as they may thus assist each other. If there is no unity of plan, they may, and probably will, counteract each other. It should be remembered that a current of air through a room is to be avoided as far as possible.

The multitudinous plans for ventilating rooms are all different ways of doing the same thing, which is changing the air of the room. General principles can only be established, as the details necessarily vary with the situation of the building, its exposure, the manner of heating, etc.

4th. School-room furniture:

With regard to school-room furniture, the kind of desks with seats attached which are used in most academies are as good as any. There should be as little cast iron as possible about all such furniture for mutes, as their infirmity prevents their knowing how severe a blow may be upon any piece of furniture, or indeed, if there has been any blow upon it at all.

For advanced pupils the desks should be large enough to accommodate two persons.

New classes should have more space for physical and physico-mental exercises, and need no desks at all. A row of chairs in front of slates fastened to the wall is the best method of seating a new class. A chair should be in front of each slate, with large enough space between, for the pupil to stand, and the teacher to pass. These chairs should have well-spread, and well-braced legs, and both front and back legs should be nailed between strips of board which are nailed to the floor.

Genuine slates are the only ones worthy of use in a Deaf and Dumb Institution. Wooden imitations are too light, too easily indented, too apt to lose their coating, and often do not show the marks of the crayon or pencil. Slates should be fixed firmly, and should stand perpendicularly. They need not be framed. A strip along the tops and bottoms is sufficient. For each slate a rubber attached to a string should hang from the upper strip. A slight ledge attached to the lower strip will hold the pencil or crayon.

For rubber, ssheep-skin nailed to blocks 2½ by 8 inches are very good. The wool should be sheared to about a half inch in length. These are cheap and durable, and can be easily renewed by the pupils. The nails can be driven

into the edges of these blocks to prevent their scratching the slates. The dust is easily shaken out of them by striking their backs together. An old buffalo robe makes as good rubbers as sheep-skin.

Classes that have progressed so far that it is necessary for the teacher to visit every slate in order to correct it, can use soap-stone pencils on their large slates. These are cleaner than crayons and make less dust in the room when they are rubbed. The clouds of crayon dust, lodging in eyes already desiccated by the parching heat from hot iron surfaces, irritate their tender coverings, and assist, if they do not produce, the inflammations which afflict so many pupils.

These suggestions are given after an experience of several years with the Deaf and Dumb, with the hope that any person who can suggest any improvement on what has been herein advanced will on no account fail to do so.

If those who have had experience will communicate it to the profession through the medium of the Annals, every one may thus become possessed of the experience of all, and those for whom we labor can not fail to reap the benefit.

ON MANAGEMENT.

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Few subjects could probably be found more worthy of consideration, more important in the general work of education, than the one the above title represents. In venturing to call attention to this subject, the object principally in view is to attract the notice of some of those, whose wide range of observation enables them to speak with authority, in the hope that they may be led to give us the results of their valuable experience. It is well, at times, to go back to first principles, even though there is no new work to be inaugurated, nor deficiencies to be made good. In the few remarks which follow, the

reader's indulgence is claimed, if they be found to embody, in some instances, crude ideas, or even to be based upon ignorance of facts the knowledge of which might, perhaps, have materially modified the views set forth. The isolation in which our profession has been involved, the want of intelligent communion between the various members of it, and the reticence of information on matters affecting the work, would be a sufficient excuse for a large amount of ignorance of matters which do not lie within one's immediate sphere of labor. These remarks are not, of course, intended to apply to American effort.

The subject before us presents two aspects, one having reference mainly to the administrators of the work, the other to the mode and manner of conducting it. It is to the first of these that we propcse at present to direct attention. And it may now be added that in considering it, we are brought face to face with several difficult questions which are more easy to ask than to answer.

In many respects, the little communities with which we are connected bear a striking resemblance to the great political bodies, in which men bind themselves for mutual support and protection. Their system of management we may briefly summarize as follows: In each of them there are fundamental principles of government; a body of laws varied and variable according to circumstances, framed with the object of guiding the members of the community in their different relations to each other; persons in whom resides the power to change or abrogate these laws; and and an executive administering such laws for the common good. We can hardly imagine an organized state in which such features as these are absent. Their presence is the first essential of order, their absence is confusion and chaos. May we not say the same of such communities as ours?

To go further. The most conclusive evidence in a political community of a high state of civilization is a complete and wise code of laws, embodying a careful adjustment of the various relations in which the members of the body politic shall stand to each other, in their

privileges and responsibilities. In like manner, we may fairly say, that the best guarantee we can have, that the objects for which our institutions are established are carried out, will also be a carefully constructed code of laws defining duties and responsibilities, without tying up energies or restricting free action where such is necessary. But this consideration has not always been present in the minds of those whose philanthropic efforts have resulted in their establishment. In some, there are no laws at all, and a state of affairs is allowed to come into existence similar, in some degree, to what might be expected if there were no constitution in a state. On the other hand, rules have been drawn up by persons unused to management, which are as absurd in principle as they are impossible to carry out. In both cases all the power falls into the hands of an individual, and a system of autocracy is established which works well or ill according to the character and disposition of him who wields the power. When we consider how easily we can silence fault-finders by appealing to the recondite nature of our work, and with what facility the appearance can be put on when the reality is absent, and further that the wholesome influence of public opinion as it measures by results, can exercise little control on the doings of our institutions, we can not but ask that such power and responsibility, involving as it does such immense interests in its exercise, should not be left in the hands of any man, however good he may be. The most arbitrary, one would think, would rather have their power and responsibility defined, and restricted within reasonable limits, than find themselves possessed of an apparently unlimited power, dangerous alike to its possessors and to those with whom they come in contact.

In the interests of all concerned in our new work then, we would say, let our institutions have the benefit of a wise system of fundamental laws; and let not such laws require, in their administration, an entire abnegation of all the rights and privileges they have in common with other men, nor imagine such entire devotion to the

work as can only be looked for in enthusiasts; but let them rather be based upon a full and fair consideration of what can be reasonably expected of ordinary mortals, and depend also for their observance upon justice and the possibility of carrying them out.

And now for the persons concerned in management. The Committee or Board of Division comes first. This body will be none the less useful if its powers and duties be defined, and the latter placed within the range of possibility of performance by ordinary men. If it attempt to settle such matters as can only be fairly considered by men of special aptitude or training, and, generally, to do every thing; its decrees will often be absurd, and its doings either unintentionally unjust, or foolishly meddlesome, or, more likely still, characterized by hopeless inaction, a mere following of routine and red-tapeism. It is not to be denied that many committees, who are expected to do as much as is here indicated take especial pains in the performance of their duties, and consist of very able men; but, nevertheless, it can not, in general, be looked for that such bodies shall be made up of those who possess just such qualities as are necessary to make them competent to decide on every matter educational or general. Various circumstances often make it almost impossible to get the men best suited, by their experience and business habits, for even ordinary duties. This being the case, it becomes all the more important that the committee should have its duties and powers defined. Let this be so, and let the special performance of such duties be looked upon as a matter of course, and not as implying mistrust or suspicion, and then the work of the Committee will be a good security to the public that its desires are well carried out.

For the information of the Committee on subjects which lie beyond its powers of judgment, and as a guarantee either to the legislature or the subscribers that all the departments of the institution are working in harmony, and that it is fulfilling the intention of its foundation, it is proposed that there shall be a system of

periodical inspection. Some may say that the Committee in itself will be sufficient for this purpose, but those who have had much experience, will, it is thought, concur in saying that an irresponsible and perhaps not over-industrious body of men is not the most complete security that could be devised for the objects in view. The inspection proposed, to be really efficient, should be carried out by properly qualified persons, entirely unconnected with the several institutions they inspect, their managers or executive. It should not be expected that the inspector, should look at every thing that comes before him through rose-colored spectacles, speaking only in praise and maintaining silence on defects. Rather, having the ability, he should be required boldly to point out abuses and short-comings where they are found to exist, but his principal duty should be to test results. Supposing such a scheme of inspection to be widely spread, and that it were carried out upon a well-defined system, many good results might be expected to flow from it. An effectual guarantee would be furnished that the interests of the work of education were paramount in the several institutions; the working body of teachers would be able to compare results, to estimate the value of different systems of instruction by a sure and impartial test. Besides this we should have a standard to work up to; and should have that great incentive to exertion, which is supplied by the knowledge that one's success is recognized. Such a scheme of instruction as is here advocated has been followed for many years, with the best results, in the elementary schools in this country which receive government aid.

We now come to the executive of our little communities. This consists of the chief officer, president or principal, and the body of teachers. The domestic department and its officers, though by no means an unimportant part of the economy of our institutions, we are not now concerned with.

It is of the utmost importance that the office of principal should be efficiently filled. In a great measure the

responsibility of the whole establishment, its work and government will rest upon the holder of this post. Though deprecating that fundamental absence of law, or careless administration of it, which leaves the supreme power practically in the hands of one person, be he committee-man, secretary or principal, and which has naturally generally led to much abuse, we would yet urge that a large measure of discretionary power should belong to this office. For the principal will be called upon to exercise a control that must be decided, to be effectual or beneficial. The decision as to manner and method of teaching, the apportionment of the work among the various officers, the care that each of the different subjects of instruction receives its due share of attention, the general superintendence of the whole work, and the ultimate control of the domestic departments, may be considered as devolving upon him.

Every thing in these institutions should be subordinate to the educational department. It is not, therefore, unreasonable to require that the best energies of the principal should be turned in this direction. To draw off his attention from it, by giving him the care of the funds or the correspondence of the establishment, is to take him from that department for which he is supposed to be specially qualified, and to put him to work which others could do as well as he. If it be necessaay to have a principal, his presence and labors will be required in the school-room. His influence should be specially felt in the work which is the main purpose of the existence of the institution. His anxieties and cares will be sufficiently great without any extra weight being put upon him. He cannot be reasonably expected to conduct both departments well.

In regard to his school-room work, the peculiarities of his position must determine whether or not it will be wise in him to undertake a particular department of the instruction. In any case, it seems reasonable to say that his duties should not be confined exclusively to supervision, but that he should teach *sometimes;* else how can he

become practically acquainted with what is going on, or be *au courant* with the various phases of progress around us? His position supposes him to be an experienced teacher, but if his experience be not brought actively to bear upon the work it will be of little avail.

We now have to speak of the working teachers, the body upon whose energy and faithfulness so much depends. And, first of all, we would make an earnest protest against the system of requiring them to perform, or superintend the performance of the various domestic operations which are incident to large institutions—a system which calls for an expenditure of time as unreasonable as it is detrimental to the best interests of the work for which they are especially engaged. It can not be supposed that energies will be so fresh, or aptitude for labor so great after close employment in duties which properly form no part of a teacher's duty, as they would be if the real work for which a teacher is engaged had his undivided attention. Taking only this view, and leaving out of the question the unpleasantness of such employment, it would seem to be wisdom in the governing body to consult the benefit of the pupils by giving them *teachers*, and not men whom they intend to drudge for thirteen or fourteen hours a day, a great part of this time in a wearisome monotony of duties which lie outside the sphere of a teacher's work. Gardening, printing, bookbinding, cleaning knives, scrubbing floors, and such like, are very important and necessary employments, but to require persons holding the office of teachers to do, or superintend the doing of them, is certainly not the proper way of getting them done.

In asking for the subordinate officers of each institution a defined position, and the recognition of rights in opposition to the system, or rather want of system which leaves them, their home and prospects, under the control of one person, no one, certainly not in America, will think that such a request goes beyond the limits of reason. Let proper care be shown in the selection of such officers; let it be required that they show an apti-

tude for the mastery of the language in which they will be required to teach, and, above all, let some evidence be required of the possession of that honesty of purpose and earnest conscientiousness which will go further than any other qualities to secure success. Having found and trained the possessors of such qualities as these, it will be a calamity to the cause if want of due appreciation, or the withholding from them of such rights as belong to to them as men, force them to withdraw from the important sphere of labor for which they possess such high qualifications. It is a pity that it is not more generally known to managers of institutions how comparatively useless a novice is as an instructor for a considerable time, and that, as a consequence, the instruction of the pupils must suffer during the time he is gaining his experience. Were this fact more generally recognized, a higher value would be set on the labors of those who have passed through the necessary training, and have become teachers.

It may be asked, what will be the effect upon those, whose interests must be paramount in our ideas, of a definite and wise system of management? To this we may reply, that such a system, well carried out, will insure to them the benefit of the best teaching, and, consequently, the most complete alleviation, of the evils which are the results of their deprivation, that is possible. Harmony existing in every department of the work, there will be a concentration of effort towards the particular ends it has in view; there will be an effectual guarantee that its objects have the attention that the urgency of their case demands; and that art and skill in the highest possible degree have been brought to bear upon the consequences of their calamities.

What is here advanced is necessarily confined to mere bald outlines. The necessity for system in management, which is what we plead for, can not be taken as implying any doubt of the trustworthiness of the present administrators of our institutions, who, as a body, will bear comparison, in the earnestness of their efforts, and the

spirit of philanthropy by which they are directed, with men engaged in any pursuit. As nations advance in numbers and civilization the necessity for the complete organization of their efforts, philanthropic as well as political, becomes the more imperative. And as our work is forcing itself into recognition on all sides, and bids fair to become, in every country, an important department of national education—comprehending all legitimate objects within its scope, it is of the last importance that defective systems, which may have done good serbice, when efforts were feeble and desultory, should be superseded by those which rest upon a broad basis of comprehensiveness, and contemplate, in their design, the complete execution of the work.

THE MANUAL ALPHABET.

BY H. H. HOLLISTER, M. A., COLUMBUS, O.

In studying the Manual Alphabet as it appears in print, we have examined the various representations as they are published in the following reports and books: Illinois, Tennessee, North Carolina, (both early and late reports), Georgia, Indiana, Missouri, American Asylum, Wisconsin, Virginia, New York, Ohio, Kentucky, Peet's Elementary Lessons, and Jacobs' Primary Lessons for Deaf Mutes. The general aim in all these representations, except the later reports of the North Carolina Institution, seems to be to furnish simply the position of the hand without reference to the relative position either of the person spelling or the person reading the spelling. The supposition evidently has been that in this way the letters can be most clearly represented. The great objection to this mixed method, as we would term it, is the lack of uniformity. Now, it may be laid down as a general rule that the palm of the hand is to be towards the person who is reading the spelling. If, in the light of this rule, we examine the common printed alphabet, the irregularity will become very apparent. We shall find

that sometimes the front with the hand perpendicular, as in the letter *b*, or with the hand horizontal, as in the letter *j*, is presented to the view. In several letters, as *i*, *u* or *z*, the plain back of the hand is seen, while in more than half of the letters the thumb part of the hand is toward the eye, either in the perpendicular or horizontal position. These remarks are general, and apply to all the printed alphabets which we have seen, except the North Carolina Reports as stated above.

There are several particulars in which the printed alphabets differ among themselves, which it may be well to notice. The Ohio, Kentucky, Missouri and Illinois reports, and Jacobs' Primary Lessons, differ from all the other documents in the way that they represent the letter *l*. In these five representations we find the thumb extended in the same plane with the palm of the hand, while in all the other representations the thumb and middle finger are in contact. The former is the true position of the thumb, as the letter is almost universally made both by the Deaf and Dumb and their instructors. The latter method represents, perhaps, the original way of making the letter, which was, as Dr. Peet once remarked, with the hand in the same absolute position as in making the letters *g* and *q*, the only distinction being in the horizontal, downward, or vertical position of the hand. It will be noticed that the former method agrees better with the general rule already stated of keeping the palm of the hand towards the person for whom the spelling is intended. Again, the letter *s* is represented in many reports with the hand almost perpendicularly upwards; while in other cases the hand is in an almost horizontal position. The former, we believe, is more nearly the common position of the hand in forming the letter while spelling. *G* and *h* are generally represented with the back of the hand uppermost; while in practice the palm of the hand is vertical, with the thumb and index finger nearly in a horizontal plane. An attempt has seemingly been made in the Indiana Report to represent these letters as if made with the hand pointing to

the zenith.* The Ohio Report for 1869 is a great improvement over all the others in the engraving of these letters; for the hand is shown in its natural position. The letters *e* and *p* in different reports have different degrees of elevation or depression. The extremes of e may be found in the Tennessee Report and the Ohio Report. *I* is represented generally with the thumb upward and little finger horizontal. This is never the case, we believe, even in connection with the curved movement of the hand. The true position is but little different from that of *i*, and is correctly represented in the last report of the Ohio Institution. We notice that the artist in Jacobs' Primary Lessons has used the left hand in making the letter *i*. *T* is represented sometimes like *i* with the thumb raised. In many reports the thumb and little finger are spread out as if to imitate the printed letter. We are happy to see that the Ohio Report for the year 1869 has remedied most of the special defects which we have noticed, and given us an alphabet which for naturalness of position is the most perfect mixed alphabet that we have seen. As we have already intimated, the late Reports of the North Carolina Institution (the copy before us is for the year 1865-'66) have stepped outside the beaten path and given us, as far as we are aware, an entirely new representation Manual Alphabet. In this we have a front view alphabet, or an alphabet in which the letters are represented as seen by the person who is reading the spelling. This alphabet possesses over all others the superiority of being perfectly uniform—a condition which cannot be too highly commended. For this cause, if for no other, we would not hesitate to pronounce it better than any other printed alphabet that we have seen. As a representation of the letters we can see no positive objection to the front-view method.

Such is the Manual Alphabet as it appears in print in the several documents and books named at the commencement of this article. From our examination of the

* We find the same representation in some old French alphabets. This suggests that the letters may have originally been made in this way.

subject it would seem that the Deaf and Dumb Alphabet may be printed in three ways, viz: the mixed, of which the common printed alphabet is an example; the front-view, of which the North Carolina Report of 1865 and 1866 furnishes an example; and the self-seen alphabet, or the letters as they appear to the person spelling, which, we believe, has never been in print, although single letters very nearly corresponding with this method may be found in all the Reports. The first way may have some things in its favor, but there are many serious objections to it. An artist in preparing an engraving of a building, would not represent the house alone, and leave out of view the grounds and surroundings. The relative position of the trees, fountains and other things around the house is essential to give a right understanding of the beauty of the building. Yet the relative position of the persons interested and the hand which forms the letters is no less essential to the light understanding of the Deaf and Dumb alphabet. As already stated, the front view method does away with the objections against the mixed alphabet. We shall endeavor to show that the self-seen is not only free from the same objections but possesses a positive advantage over the other methods. The self-seen has the same uniformity that is found in the front-view alphabet. As to the relative perspicuity of the mixed and the other methods, it might seem, at first thought, that the mixed alphabet could be most clearly represented in print. But we must remember that there is no greater element of perspicuity than uniformity. So that without this element the mixed style must fail to give as clear an idea as either of the other methods. It must be borne in mind that we do not claim as great definiteness in showing the parts of the hand as may belong to the common method; but we do claim that whatever lack of definiteness there may be is more than compensated for by the additional perspicuity which uniformity gives. Again it may be said that it is impracticable to represent the alphabet as we advocate—that some part of the hand must be hidden from view. It might as well be

pronounced impracticable to represent the trees on the lawn in an engraving of a house, for fear it would conceal some part of the building; when the fact is, as everybody knows, that the trees and surroundings help to give a clear conception of the house. Besides, in reference to hiding a part of the hand, it must be remembered that only one half of the hand can be shown in any method of engraving the letters, and as much can be shown in one method as another. The North Carolina Report, even with the engraver's work somewhat imperfect, demonstrates that as far as the front-view alphabet is concerned there need be no obscurity. For such letters as *c*, *j*, *o*, *p*, *q*, &c., in which we might suppose it would be most difficult to show the parts of the hand, while they may not be as definite as the common printed alphabet, are sufficiently intelligible for all practical purposes, and we cannot see wherein the self-seen should be more obscure or impracticable to be represented than the front view.

The point, in which we would claim a positive advantage of the self-seen alphabet over the others, is perfect adaptation to the great purpose for which a printed manual alphabet is designed. This purpose is to enable individuals without the aid of a teacher to learn to form the letters correctly on the hand. The deaf and dumb child is given a printed manual alphabet, and told to learn to form the alphabet upon his own hand. He looks at the printed *a*, then at his own hand, and forms the letter nearly correctly. He looks at *b*, and forms the letter with the palm of his hand towards his own face; and so on through, sticking closely to his models. The result is that when he spells words he is constantly turning his hand in forming *b*, *e*, *l*, &c., so as to show the back of it to the person who is reading the spelling. These errors are not confined to the Deaf and Dumb. They are frequently seen in hearing and speaking persons in their first attempts to use the manual alphabet. Now the method which we advocate would remove these bad features by furnishing correct models for forming the letters. The alphabet when once learned would be

correctly learned, and there would be no bad habits to be overcome.

In view of all these considerations we cannot help regarding it a serious oversight that artists in engraving the manual alphabet should have departed from the uniformity and naturalness which characterize the application of their art to most other matters. We simply ask that in this matter the Deaf and Dumb receive the same care and attention which are given to other persons under similar circumstances. For, we believe that the adoption in print of the alphabet which we advocate would be only an application to this subject of the same principles which the engraver applies to the common illustrations of books designed to convey information.

BOOKS, PICTURES AND ILLUSTRATIVE APPARATUS FOR THE DEAF AND DUMB.

BY JAMES H. LOGAN, A. B. JACKSONVILLE, ILL.

Comparatively few pupils of our institutions acquire, in the six or seven years allotted to them, the facility of reading with readiness and ease. In almost every book and paper they take up most of them are embarrassed by unfamiliar words and phrases. Undoubtedly the chief reason is that their reading at school has not been sufficiently extensive and varied to make them familiar with written language.

A hearing and speaking child soon learns to comprehend the language in ordinary use. The words which he hears every day become impressed upon his memory by frequent repetition. Moreover, persons who speak to children usually take pains to adapt their language to the comprehension of the child. The familiarity thus acquired enables him in a few years to read with facility all ordinary books.

The great object to be attained in the education of the Deaf and Dumb is to impart to them a perfect familiarity with written language. Now with deaf mutes this

familiarity must be gained in the same way as other children gain theirs—by endless repetition and an adaptation of the language used to the comprehension of the pupil. As the ear is closed, this can be done only by daily and frequent reading in and out of school hours. Furthermore, the reading must be made a positive pleasure and not a task. Few pupils spend much of their leisure time in reading, and this chiefly for the want of suitable and interesting books. If we expect to get good books for the deaf and dumb we must expect to pay a good price for them. To produce such books requires plenty of brains and money. Gold is always dear; pinchbeck always cheap. Deaf mutes are like other children, and not apt to be interested in what has no attractions for the latter. A taste for reading, if properly cultivated, will in a few years become fixed for life. When the pupil finds the book dry, or else full of unintelligible words and phrases, it is little to be wondered at that he becomes disgusted and discouraged. For this he is not greatly to be blamed—under these circumstances he is only gnawing a nut without a kernel. It is therefore necessary to prepare books sufficiently simple for him to understand readily.

The effort a person will make in anything is proportional to the interest excited. If an interest can be awakened and kept up, a habit of reading may easily be formed. Interest always stimulates the faculties to vigorous activity. It then follows, that to excite an interest everything must be made as attractive as possible. God does not make unattractive flowers and then tell us to study them, in spite of their repulsiveness, for the sake of intellectual discipline.

The pupil should begin to read as early as practicable—just as soon as he can understand a simple sentence consisting of nothing more than a subject, predicate and object. To succeed here the teacher will be obliged to prepare books himself and have them printed. In such institutions where there are printing presses this is practicable. Provided it is within their comprehension, all

pupils, even the dullest, will read what interests them. Differences of tastes will have to be carefully studied, for what interests one may entirely fail to interest another. In this, however, children are only like their elders. The importance of variety is thus evident.

The teacher can easily write a great number of interesting stories in such simple sentences as to make them intelligible to the pupils. He knows what words his class are likely to understand, and by using these and introducing new ones only occasionally, he may be able to prepare books which will be read with eagerness. It is not necessary for him to invent the stories himself; but merely take them from other books and simplify the language. In this way, by a series of graded reading books, in which new words and more complex sentences are introduced very gradually, the pupil may be led on pleasantly until he arrives at a point where he will be able to understand with ease the language of ordinary books. If properly encouraged and supplied with interesting books, the pupil will insensibly acquire the habit of reading, and when fixed he will be obliged to indulge it through life.

In order to encourage and cultivate a taste for reading, a large library of well-selected and attractive books is indispensable. A very wide range of subjects should be embraced, so that each pupil, from the youngest to the oldest, may always find something to interest him. For the youngest an ample variety of toy books should be provided. Many of these books, published in England, have very attractive colored pictures of animals, plants and other objects of interest. These will greatly interest the pupil, give him much valuable knowledge of things, and encourage him to learn new names. They will prove a stimulus to what is of the highest importance—independent effort. The younger pupils should be allowed to visit the library at certain times, and, under the supervision of a competent person, look over such books as they may fancy.

Popular Natural History, Physics, Poetry, History, Biography, Fiction, Travels and Adventures, and in fact everything capable of affording amusement and information should be very largely represented. When the mind of the pupil is well filled with a knowledge of things he is well prepared to engage in the study of books written in a more technical style. With a knowledge of animals and their habits the pupil is qualified to understand the classifications in Zoology. With such a variety of books accessible to all, latent tastes are more likely to be called into activity. A book taken up by chance very often determines the course of a man's life. Some deaf mutes have very decided tastes for Literature or Science; but without abundant means of gratification such tastes are liable to die out—perhaps they often do and we never know it. Frequent and varied reading exercises an important influence upon a person's style of writing. A congenital mute, perhaps, can never hope to attain an easy flowing style; yet he may be able to write with clearness, which is a much more important quality than a harmonious, but unmeaning, jingle. It may be that some deaf mutes are destined to become eminent in Literature and Science; but they must have abundant means for acquiring varied knowledge and culture while young. It is only under such conditions that talent can be properly developed.

Some pupils will care for nothing but adventures and other exciting tales. These are very desirable, as they will serve to stimulate some who without them would not read at all. Let the pupils during their leisure time read fairy tales, anecdotes, adventures, novels and other stories to their heart's content, only taking care to exclude everything immoral. With this exception let them be entirely free to gratify their own tastes. Let them have the Arabian Nights' Entertainment, Robinson Crusoe, Anderson's Tales, and every other book which is the delight of speaking children and youth. Deaf mutes should know all about these like other children. It must be remembered that if the pupil acquires no very

solid information by such reading, he nevertheless gains what is of the highest importance to him—a familiarity with written language. Even from such books, however, much of real value, as a knowledge of different countries, their inhabitants, plants, etc., will be obtained. Perhaps we cannot expect to make all capable of enjoying the choicest gems of literature; but we may hope to give to each the ability to read with pleasure and profit such books as are suited to their comprehension.

It may here be remarked that a library for the teachers is also quite indispensable. It will need to contain all the most important works on Science and Literature, besides educational works. The teacher will frequently need them for reference. He will have facilities for becoming thoroughly familiar with any special department of Science or Literature for which he may have a taste. Such a result is certainly very desirable. This part of the library should contain the principal American and foreign Magazines and Reviews, both literary and scientific. A selection of the best papers would be a valuable addition. The teacher will thus be able to keep himself fully informed as to the discoveries of science and all other events of interest.

A large proportion of the books designed for the use of the pupils should be in very simple language and profusely illustrated; for pictures, besides the pleasure they give, act as definers of the text, and convey far more correct ideas than could be gained from the words alone. It may here be repeated that though a large number of suitable books may be found they are generally expensive. It is better to have well illustrated books, even if costly, for with good engravings constantly before his eyes, the taste of the pupil will be refined. Poorly executed engravings are always to be condemned; if a person of good taste sees them they offend; if one whose taste is not yet fixed becomes used to them they degrade his conceptions of the good in art. With such opportunities for improvement and culture a modern civilization affords, no one has a right to do poor work. A taste for

good pictures is secondary in importance only to reading. They inform the mind and appeal to the emotions as strongly, and often more strongly than written words. Every object in Nature, every event in History, and the conceptions of the Poet may be represented in pictures. When this is the case the mind gains a more correct idea of the things and events represented than could be gained by reading. Few persons have the ability to create such vivid conceptions of events as the artist, but all can make the picture, which he has produced their own mental possession. Good engravings of historical events are exceedingly valuable for the information they give as to customs, costumes and architectural peculiarities. The physical characteristics of different regions, plants, animals and every form of material object are readily and clearly apprehended in pictures. One who has seen many such pictures, when he comes to read about the things represented, is able to comprehend them more clearly.

Young pupils take a great interest in pictures, especially if colored. When shown such, their countenances brighten, and they manifest much eagerness to learn about the things represented. In half an hour's time two or three pictures may be shown and fully explained to a class. In this manner the names of half a dozen objects may be learned daily. If this exercise were kept up daily for a year, it is manifest how great a benefit would result to the pupils in increasing their stock of information. Success, however, requires that the teacher should have an interest in the work, and that each picture should have something new and attractive to the pupils.

The moral value of pictures is also very great. Suppose, for instance, that the teacher has a a copy of the Bible with Doré's illustrations. He can use one or more of these to illustrate a Bible story every Sabbath. The exercise will thus be doubly interesting and leave a vivid impression. If this be continued until the whole series of pictures has been shown, the pupil will see how really attractive the Bible is, and associate it with one of his

greatest pleasures. It may be considerable time before he can read it himself, and, unless his interest is awakened, he may never make much effort to do so. The children can understand and enjoy the pictures. Let them have all the pleasure they can this way; their minds will be filled with pictures of Bible scenes and events, thus fitting them the better to comprehend the sacred volume when they begin reading by themselves.

In teaching it is always desirable to have an accurate representation of new objects, when the object itself cannot be shown. In this respect the stereoscope may become very valuable. In the hands of a good teacher it may be made to convey a vast amount of information in a very interesting manner. We now have steroscopic pictures of almost every object and place of interest in the world. A carefully selected assortment of these, embracing every important city, views of remarkable scenery, palaces, statues, animals and plants, would be of the greatest value as an adjunct in the teaching of geography, natural history, and other branches of physical science. The view of a mountain, the sea, a plain, a river, and every variety of natural scenery, will explain the objects far more vividly than could be done by verbal description. Another advantage is that objects thus presented are more easily remembered. Much, however, will depend upon the skill of the instructor. Too much should not be shown at a time. A few good views, perhaps never more than a dozen a day, unless specially needed to illustrate some point, should be exhibited for a sufficient time and everything of interest explained. Impressions thus made are vivid and lasting. Stereoscopic views will, also, afford very good subjects for compositions by the pupils. A very young pupil can, at the least, enumerate the names of familiar objects in the picture. The interest thus excited will prove a strong stimulus to the pupil. Were one or more good stereoscopes placed in the library, and used daily, a pupil might, during the few years of his stay in the institution, gain a larger stock of information in regard to places

and things in this world than most people possess. He would also be able to gain knowledge of the most important industries, and almost every social condition of man. Each teacher might have a hand stereoscope for use in the class-room whenever required. Since the objects are represented in relief, and apparently of the natural size, it is evident how great a help the stereoscope may prove; but, as before remarked, the degree of success will depend mainly upon the intelligence and skill of the teacher.

Stereopticons and magic lanterns are also very desirable. These have the great advantage of exhibiting a large picture to any number of persons at the same time. For these instruments thousands of objects have been prepared. An exhibition, every one or two weeks for a season, would prove highly interesting to both teachers and pupils. By means of Doré's illustrations, mute children may realize the conceptions of Dante's Inferno, and gain as much pleasure as others derive from reading the book. Such pictures put the pupil in possession of the finest creations of poetic genius. It may be quite a long time before any of the pupils will be able to read Dante or Milton with pleasure, since this requires a considerable degree of culture. The pictures, however, will express in a more vivid manner what the poet expresses in written language. The pictures are in reality only a more powerful means of expressing ideas. The use of language is to express ideas, and if pictures can do the same thing more clearly, and in less time, they are to be preferred, since the idea once gained is readily understood when afterwards clothed in words. All of Doré's illustrations to the Bible and to Paradise Lost, have been photographed and colored for the magic lantern. As a means of awakening interest and impressing moral truth, they are in many cases very useful. They will help make the events of the Bible more clear and lifelike to the pupil, as they are expressed in a language easily explained and easily understood. With his mind filled with these pictures, the imagination of the pupil

will be powerfully stimulated and his thoughts kept active.

Another instrument of great value, indispensable in the study of animal and vegetable physiology, is the microscope. It exhibits to us marvels unseen and unthought of in the commonest objects. The great value, in an educational point of view, consists in exciting a taste for the study of nature, and training to habits of accurate observation. The delight which may be derived from using it merely for amusement is very great. Such pupils as manifest an interest in it should be taught how to use it, and thus be enabled to minister to their own pleasure and that of others. If we succeed in encouraging a few to engage in special studies, the trouble and expense will be amply repaid. The instrument is one of value in nearly every department of physical science, and the pupil should be acquainted with its applications so that he can make use of it should occasion ever require. When it is desired to exhibit objects to a large number of persons at once, the oxyhydrogen microscope will be of great value.

To illustrate anatomy, both human and comparative, nothing can be finer or more effective than the elastic models prepared by Dr. Azoux, of Paris. The labor of comprehending the true relations of the muscles and other organs, even from a good drawing, is sometimes great, but with these models the relations are easily understood. With these models the progress of a class in anatomy or botany would be very rapid. In addition to these, every other kind of philosophical apparatus, which may help to illustrate and explain, is necessary. The things above mentioned are but a few of the adjuncts capable of being made serviceable in a large educationa l establishment. Such as have been selected will serve to show the utility of all apparatus capable of conveying clear representations or illustrations.

Some may say that it is impracticable to use such instrumentalities on account of great expense. The advantages of these, however, is very great, and we must have

them if we wish to attain the highest results in the education of the deaf and dumb. The expense should be considered no objection at all. We spend three hundred dollars or more a year on our perishable bodies, and yet grudge the small sum of fifty or one hundred on our immortal intellects, which crave their food as strongly as the body does its own. A sufficient amount and variety of mental food is as necessary for the proper development of the intellect as for that of the body. We take every means to make our bodily food as pleasant as possible, and should do the same with our mental food.

In an institution numbering 200 pupils an outlay of $2,000 per annum, devoted to the purchase of books, pictures, and philosophical apparatus, would involve the trifling sum of $10 per year on each pupil. When we consider how great are the benefits from such an appropriation devoted to these special purposes the sum seems very insignificant. Such a sum thus applied would, in a few years, supply any institution with a very fine library, the best philosophical apparatus, and a museum of zoological, botanical, mineralogical, and various other collections. These are all exceedingly valuable and desirable in institutions for educational purposes. They will serve, not only to inspire a taste for refining pleasure, and vastly increase the mental acquisition of the pupils; but also serve as a means of attracting the most capable men to the profession of teaching the deaf and dumb. With such excellent facilities for pursuing their favorite studies many will be more likely to remain permanently in the profession. Another, by no means unimportant advantage is, that the institution will be better able to interest and benefit the public. The teachers, by being required to use philosophical apparatus and explain the various objects in the museum to their classes, would be kept up to a higher degree of efficiency. In fact it is often a great discouragement to the teacher that he has not at hand the requisite means of illustration. Unless he has every thing needed within reach, the ablest teacher is necessarily hampered. The most skilled workman loses

much time, and does the work poorly, if obliged to use inadequate tools.

There is no good reason why every institution should not be provided with a good library and some illustrative apparatus. All the pupils, even the youngest, may be made to comprehend, but in different degrees, such things as they serve to illustrate. There is, perhaps, nothing which may not, by means of a good teacher and proper apparatus be made quite clear to a class of two or three years' standing. For older classes all these are certainly necessary. We must give pupils every opportunity to learn as much and as early as they can, not forgetting, however, that language is the main object. If we can have the pupils made familiar with the various objects and phenomena of nature, they will be much better fitted to comprehend what they read about these things. With a great variety of objects stored in the mind, classification becomes an easy process, and the pupil can engage with interest in the more scientific study of natural history. One very important end in education is to store the mind of the pupil with objects which he is afterwards to work upon.

In England some scientific men have been trying to popularize science among the working men. They have met with very cheering results, which afford ground to think that systematic efforts in the same direction among the deaf and dumb will be equally successful.

The system of public instruction is in many places receiving a large share of attention, and earnest laborers in the cause are striving to avail themselves of every possible help, and thus carry it to the highest state of development. The circumstances of society are continually changing, and every few years new light is thrown upon some point in education, or better means are placed within our reach. There is always room for improvement. We must never be satisfied with what we are doing. As soon as we think we have reached perfection we shall begin to retrograde. In order to bring the system of deaf-mute instruction to the highest degree of efficiency,

every member of the profession must observe, think, and be quick to take advantage of every thing likely to prove of service.

With every advance in civilization a higher degree of culture is required of every one; but this is not practicable without a corresponding improvement in educational methods. The system of deaf-mute education must keep pace with that for the hearing and speaking. Whatever is found serviceable in the former, save in the single case of exercise in spoken language, will also prove valuable in the latter. If we look back twenty years ago we can readily perceive how much better we are provided with books, pictures, and illustrative apparatus of all kinds. Whatever the expense may be we must not hesitate to avail ourselves of the use of any of these which are capable of doing good service. If we all labor earnestly, according to the light and ability given to us, and avail ourselves of every means likely to be of service, we may reasonably hope, under the blessing of Providence, to carry the system of deaf-mute education to a higher degree of perfection than has hitherto been attained.

DIFFICULTIES CONNECTED WITH DEAF MUTE INSTRUCTION.

BY W. H. LATHAM, M.A., INDIANAPOLIS, IND.

The teacher of the deaf and dumb is often discouraged. He feels that he is not accomplishing all he would accomplish, nor all that is expected of him. Indeed it has been intimated, if not directly asserted, and this too by one in high position, that the teachers of the present day are comparatively inefficient,—that they do not accomplish as much in the advancement of the deaf mute as did those of an earlier day. If such be the case,—a point we would not pretend to dispute,—there must be a cause or causes for such deficiency.

It is our purpose in the present paper to hint at some of the difficulties and hindrances which lie in the way of

more successful effort in this arduous and perplexing field of labor. We write this as the result of observation and practical experience of more than a score of years in two of the oldest Western institutions. We have no knowledge of the workings of other institutions, except from report, but suppose all institutions are conducted upon the same general principles, and that they all labor more or less under the same disadvantages.

One great difficulty, and perhaps the greatest, is the want of an efficient corps of experienced teachers. This want is felt to a greater or less extent in all institutions, and never more so than at the present time. Such has been the increase in number of new institutions, and so frequent have been the demands upon the older institutions for officers and teachers that no institution has been able to retain its complement of teachers of ripe experience. While such is the case, can it be a matter of wonder that more is not accomplished, and this too when the number of pupils has been largely increased, thus demanding rather an increase than a diminution of efficient instruction? To build an edifice complete in all its parts requires skilled and experienced workmen; to complete it in short contract time, requires competent force as well as skill. To accomplish the needed and required result in the education of the deaf and dumb, there should be a competent force of skillful and experienced teachers from foundation to turret. The same tact and skill, at least in quality, if not in degree, is as necessary in the initiatory as in the more advanced stages of pupilage. If the foundation be defective the whole superstructure will be faulty. This desired end cannot be attained in the present condition of our institutions, where the number of experienced teachers is relatively so small.

In this view of the case it is not so much a matter of surprise that teachers of a former day should have accomplished so much. The pupils were then limited in number, and were necessarily more immediately under the supervision if not under the instruction of the principals

themselves *ab initio*, and persistently through their whole course. At the present time principals are not, except in rare cases, teachers; and experienced, speaking teachers are in most cases limited to two or three, and as a consequence the instruction of the lower classes is left to new teachers, or those of less experience. The more experienced teacher has nothing whatever to do with the instruction of the elementary classes, where the foundation is laid; but he is required to finish off and perfect the superstructure with the oftimes imperfect materials as passed up to him from the lower classes. Too much is expected of him. With him rests the chief responsibility; and if in this finishing off process, to be accomplished in one, two, or at most three years, the pupil passes from his hands unpolished and incomplete, he alone is held responsible for the defect. He labors at a disadvantage. He is too often required to make complete work from defective materials on short contract time. It is much more difficult to unlearn a pupil of his errors than to teach him *de novo*. It is difficult, nay impossible, to make straight the twig of five or six years crooked growth.

These defects or errors of an earlier growth are numerous, and the results of various causes, among which may be enumerated:

Defective elementary instruction;
Misdirected effort on the part of the teacher;
A too early admission of pupils;
Imperfect classification;
A too hurried attempt at progress; and
A want of proper text-books.

It has been well questioned if the present system of deaf-mute instruction is the best that could be devised; and may it not be that the very success of those of a former period was the result of a different mode of instruction from that now in vogue? Changes are not always for the better. One thing is certain, they had not the elementary books now in use; and if, without the aid of these auxiliaries, they accomplished so much

more than teachers of the present day, these books have been of doubtful utility, to say the least. May it not be that these books, so excellent in their way, have proved rather a hindrance than a benefit to both teacher and pupil? It could hardly be expected that a system of education should be perfected in a score or two of years. The modes of instruction in our common schools have been constantly changing, and are by no means considered perfect. They have become more artificial; easier it may be for the teacher, and easier for the pupil, but it does not necessarily follow that they are better. Cramming with facts, formulas and dates, however well systematized the process, is not education in the true sense of the term. It may well be queried if the well-thumbed and well-conned books of the former, plodding, old-fashioned way of study were not productive of far more good than the routine of the present day, aided as it is by all the auxiliaries of a modern school-room. Artificiality, and too often superficiality, are the results of the teaching of the present day. The same may be said, to some extent at least, of the education of the deaf and dumb. There is too much that is purely mechanical in the process. The process has been simplified and made easier for the teacher, and it may be for the pupil, especially in the elementary departments of instruction. The book is placed in the hands of the teacher; even the lessons are marked off for him, and he required to follow the course as laid down therein. He has little or no discretionary power, and is supposed to know no other course, especially if he be a teacher who has been educated in the same way. We suppose no two teachers, if left to themselves, would pursue precisely the same course in their instruction, but here all are made to conform to one common standard, and the process becomes necessarily entirely too superficial. The pupil is required to memorize names, words and phrases almost without end, and without any immediate practical use; in other words, he is crammed according to rule, because it is so laid down in the books. A pupil who can write understandingly a

sentence of five words, is better educated than one who can only repeat a hundred words without any connection. The test of his education is the ability he possesses of using practically what he has learned. He may know a dictionary of words, and be practically a dunce. Let the pupil be taught fewer words, and more sentences, and the result will be for the better.

We have been employed since our novitiate in teaching pupils handed up in rotation from the lower classes; and we have been compelled to correct the same errors, lopping off excrescences, and filling out defects almost without variation; and we expect to go on in the same course while strength and patience hold out. We rejoice, however, to see that new ideas have been advanced as to the best mode of teaching new beginners, and we are encouraged to hope our task may yet be an easier one than heretofore.

Whatever delinquencies may be charged to the teacher of the present day, a want of zeal or lack of effort cannot, except perhaps in rare cases, be laid at his door. Yet he may, and often does, labor at a great disadvantage from misdirected effort, arising in part from causes already referred to; from want of experience, or lack of judgment. He is led ofttimes to expect too much of his pupils, forgetting or not fully realizing that they are but children learning the most difficult of foreign languages.

We have known teachers spend days, nay weeks, till the patience both of teacher and pupils was exhausted in attempting to teach formulas, of the nature and use of which the pupils were, if possible, more ignorant at the last than at the first. We have witnessed teachers attempting to indoctrinate pupils during their third and fourth years into the mysteries of parsing. Very much useless labor and a vast amount of patience have been expended upon grammar. Too much stress is laid upon its utility as a text-book. We consider the time spent in its study, more especially the syntax of grammar, prior to the very last of the pupil's course, as almost wholly

lost. He is a practical grammarian who uses language correctly, or according to common usage, and no pupil, much less the deaf mute, can learn to be a practical grammarian by the study of the theory and rules of grammar, which of themselves are often absurdities.

Teachers often spend too much time in what may be termed the discipline of their classes, to the neglect of more important duties. It is well to have good order and punctuality in the school-room, but it may be doubted if a system of marks and checks, which not only interfere with the time of school duties, but is a constant reminder to the delinquent of his deficiencies, is of any advantage. Success depends not so much upon zeal as upon judicious and well directed effort.

We know not what rules may have existed in the early history of deaf-mute instruction as to the proper age for the admission of pupils, but we do know that the average age of pupils in attendance at the present time is five years, less than it was even a few years since; and we fully believe there has been a corresponding decrease in the average of their attainments. As the rule now exists pupils are forced as it were upon the institutions at eight and even seven years of age, and in all cases, we are confident, to their own detriment and to the decided disadvantage of the institutions. They are mere infants, yet placed necessarily with those of greater age. Not much is expected of them, because they are infants, and the tendency is to neglect them, and they fall back into the succeeding classes. Thus they acquire habits of careless listlessness which cling to them through their whole course. We have known few such pupils make even a tolerable proficiency; as a general rule they become stunted into a dwarfish mediocrity, and fall far below those who are admitted later in life. We do not believe in "infant schools." If our institutions are to be made nurseries for infants, would it not be decidedly better to have the necessary department proper, separate and distinct from the school-room?

In the classification of pupils there are often great defects, which operate as drawbacks to their more successful instruction. This difficulty can, in great measure, be obviated in the larger institutions where pupils of the same relative standing and capacity can be placed together; while, in our smaller institutions, complete classification cannot be made. Classes are often formed of wholly incongruous elements, especially the more advanced classes; of pupils who have been under different instructors; of pupils who have been absent from school; of those who have pursued different branches of study. So much is the class at odds and ends that the teacher is frequently at a loss to know how he shall best adapt his instruction to the capacity of the class, as a whole. Defective pupils are always a hindrance to those in advance of them, and the van must make slow and short marches, that the rear may not be wholly lost to view. It will not do to neglect the dull or deficient pupil to push on the advanced. This is neither consistent with duty nor principle. It is far more satisfactory to the teacher to bring up the laggards, even if he seems to make but slow progress.

Entirely too much is attempted in the brief period of the pupil's attendance at the institution. Seven years is wholly inadequate for so extended a course of study as is generally pursued; embracing, as it does, beside the more ordinary branches, history, philosophy, physiology, and other branches of natural science; and, as a matter of course, the knowledge attained, if knowledge it be, is imperfect and superficial. There must necessarily be a hurried progress, and in the multiplicity of studies the teacher is liable to lose sight of the essential part of the pupil's education—the acquisition of language. This is a most serious error, and one that is more especially noticeable in the more elementary classes, where, too often, the test of the pupil's attainment is the number of pages he has gone through in the elementary books. There is a lack of thoroughness; and what with the deaf pupil is half learned is not learned at all. Better one sentence well

learned and understood than twenty imperfect sentences. And this principle will hold good through the whole course of tuition. Great difficulty is experienced in the way of correcting errors resulting from this forcing process. Classes may be handed up to the more experienced teacher without any practical knowledge of the use of capital letters; classes who have made no use whatever of punctuation; classes who may be possessed with a whole vocabulary of words with little idea of their proper relations; classes with careless, slovenly habits of writing. Such defects are by no means easy of correction, so fixed have the habits of the pupils become. What pupils are taught they should be well taught. No sentence should be written by a pupil but a perfect and complete sentence. *Festina lente* should be the motto of the teacher if he wishes for more complete success.

Connected with this last-named defect, and in great measure its cause, is the want of proper text-books for the deaf and dumb, especially for the more advanced classes. What is imperatively demanded for more successful education of the mute is a series of books including primary readers, geography, grammar, history, arithmetic and philosophy, adapted especially to his instruction. Recourse is now had to common-school books simplified, and common-school books simplified are simply facts so diluted and mystified with explanations that oft-times a bushel of chaff yields but a few kernels of wheat. What is needed for the deaf mute is simple truth simply stated, and condensed—the pemmican of thought and expression.

That the teacher may avoid any stigma or reproach, let there be a decision as to the best possible mode of instruction for beginners; let there be a judicious and shortened course of study, and proper text-books for the pupil. When may the teacher hope for these things? Till then he must be content to plod on in his weary way, disheartened, it may be be, at times, but satisfied that, under existing circumstances, he has accomplished what he has.

NOTES FROM MY REGISTER.

BY REV. BENJAMIN TALBOT, IOWA CITY, IOWA.

The Eighth Biennial Report of the Iowa Institution contains a statistical account of the pupils admitted during the fifteen years of its history, amounting in all to two hundred and forty-five.

Of these 245 cases, 150, or 61.22 per cent are males; and 95 or 38.78 per cent females. Of the 87 now present in the Institution, the males form 57.47 per cent, and the females 42.53.

Careful enumeration, from the best data to be had, shows about the same proportion as to sex throughout the State of Iowa. I have several times computed the number, so far as known, of deaf mutes entitled to school privileges, and have found the ratio to vary from that of 6:4 to that of 7:5. No such disparity exists among the speaking children of Iowa. The State census of 1869, just published, shows the number of each sex between the ages of five and twenty-one to be nearly equal; the exact proportion being: males, 51.69 per cent.; females, 48.31.

The great disproportion between male and female deaf mutes has never received any explanation, so far as I know; but our statistics abundantly confirm the fact. Indeed, the figures given above exhibit a disproportion almost unparalleled. From Dr. Peet's full and valuable discussion in the thirty-fifth report of the New York Institution I draw the following table, adding the figures for this Institution, and for those of Kentucky and Indiana:

TABLE I.

	MALES.	FEMALES.	PROPORTION.
15 European countries.....	9,934	7,806	100:78.57
Prussia, in 1843.....	6,460	5,037	100:77.97
United States in 1850.....	5,381	4,336	100:80.57
American Asylum, to May, 1851.....	598	462	100:77.25
New York Institution, to Jan., 1854.	640	525	100:82.03
Ohio In stitution, to Dec., 1853.....	323	237	100:73.37
Indiana Institution, to Nov., 1854....	200	113	100:56.50
Kentucky Institution, to Nov., 1863..	265	176	100:66.41
Iowa Institution, to Jan., 1870.....	150	95	100:63.33

Has there been in this Western country, from the hardships and exposures of frontier life, a greater mortality among male deaf mutes? or is there some subtle and undiscovered cause for a greater tendency to deaf-dumbness among the male population in new countries than those longer settled? Who can tell?

Among other items of interest in regard to the pupils of the Iowa Institution is the following table of causes of deafness:

TABLE II.

ALLEGED CAUSES OF DEAFNESS.

Congenital	91	Measles	5
Scarlet fever	34	Chicken-pox	1
Congestion of the brain	5	Mumps	1
Inflammation of the brain	5	Whooping-cough	3
Brain fever	3	Cholera-infantum	2
Typhoid fever	4	Convulsions	1
Congestive fever	3	Spinal affection	1
Spotted fever	8	Apoplexy	1
Lung fever	3	Tetanus	1
Bilious fever	1	Debility in infancy	1
Winter fever and quinine	1	Sickness (unspecified)	11
Rheumatic fever	1	Use of quinine	3
Fever (unspecified)	9	Falls	4
Dropsy of the brain	3	Bee-stings	1
Influenza	2	Grain in the ears	1
Cold in the head	2	Malformation (dumb only)	1
Severe cold	1	Unknown	19
Gatherings in head and ears	12		
		Total	245

It will be observed that in this table one case is recorded as *dumb* only, from malformation. This is the same case mentioned in the Seventh Report of the Institution, of a little boy, admitted in 1867, who was unable to speak by reason of malformation and partial paralysis of the vocal organs. He remained in school but a short time. His hearing seemed to be perfect, and his intellect bright and active; but his nearest approach to speech, in fact almost the only sound I ever heard him utter, was the indistinct sound, partly nasal and partly guttural, which one makes in trying to pronounce the syllables *um-um-um* with the mouth closed tight. The boy made this sound, however, with the mouth open. The malformation spoken of was confined to the tongue,

which was unusually short and thick, seldom, if ever, touching the teeth. The paralysis (supposed to have been the result of sickness in infancy) affected the muscles controlling the lower lip to such a degree that this was never closed except by special effort. It generally dropped forward from the teeth, leaving the mouth open, and giving a very unpleasant expression to the face. The paralysis likewise affected the muscles of the throat, and thus apparently prevented both modulation and articulation. The same trouble greatly impeded the process of swallowing, and the boy had a constant flow of spittle from his mouth, either being unable or never having learned to swallow it. Skillful physicians had entirely failed to relieve this case, and there seemed to be no ground to expect any help from either medical or surgical treatment.

Laying this case of dumbness aside, and throwing out the 19 cases in which the cause of deafness is unknown, we have 225 persons as to whom the facts are pretty well ascertained. Ninety-one of these, or 40.44 per cent, are congenital cases, and 134 or 59.56 per cent accidental.

Of the 91 born deaf, 54 were males and 37 females, while 84 males and 50 females lost their hearing by disease or by accident.

Of the 138 males reported, 39.13 per cent. were born deaf, and 60.87 per cent lost their hearing after birth. For the 87 females the proportion is different, 42.53 per cent being congenital cases, and 57.47 per cent accidental cases.

The following table will show the percentage of males and females in respect to various causes specified:

TABLE III.

	MALES.	FEMALES.
245 pupils admitted	61.22	38.78
225 cases reported	61.33	38.67
*Congenitally deaf, 91	59 34	40.66
Deaf by disease or accident, 134	62.69	37.31
Eruptive fevers, 40 cases	52.50	47.50
Brain fever, &c., 13 cases	84.61	15.39
Spotted fever, 8 cases	75 00	25.00
Other fevers, 22 cases	72.73	27.27
Dropsy of the brain, 3 cases	100.00	00.00
Nervous affections, 4 cases	75.00	25.00

It will be observed from tables II and III that, here as elsewhere, that terrible scourge of childhood, scarlet fever, is chargeable with a much larger per centage of acquired deafness than any other single cause. The cases reported here are over 15 per cent. of the whole, and more than 25 per cent. of the accidental cases. They are almost equally divided between the two sexes, as also are those made deaf by other eruptive diseases; although the male deaf-mutes are so largely in excess of the female.

Those diseases which affect especially the brain and nervous system, on the other hand, seem to have injured the organs of hearing to a much greater extent among male subjects; the per centage of male deaf-mutes who lost their hearing by these causes being largely above what would be called for by the normal proportion between the sexes, as is shown in table III.

Again, those affections of the head and ears called promiscuously and at random, gatherings, swellings, bealings, ulcers, etc., have been distributed equally between the sexes, so far as they have produced deafness. The same is true as to falls, and nearly so in regard to colds, as causes of deafness.

* NOTE.—Of those born deaf, according to this report, one of each sex was supposed to have been affected by causes operating before birth. In one case the mother was greatly frightened by the firing of a pistol, and in the other by a violent clap of thunder.

As compared with Dr. Peet's tables, these statistics show a much larger proportion of females affected by the eruptive fevers and those disorders which act locally on the organs of hearing; while the diseases and accidents which produce deafness through the nervous system affected the males to a greater extent than would be inferred from his tables. In the former class of diseases I find the males and females almost exactly equal; Dr. Peet's report making the proportion nearly three to two. In the latter class there have been with us 42 males and 15 females, nearly three to one; while by the earlier and fuller report the proportion was about four to three.

Those familiar with the causes of acquired deafness will notice the re-appearance of spotted fever, which has not been found to any great extent in our published statistics, excepting those pertaining to the earlier pupils of the American Asylum. This disease prevailed quite extensively in the southern half of Iowa, in the years 1863 to 1866. Eight have already entered the institution who lost their hearing from this cause; and there are, doubtless, more to come. So far as I can learn from the parents of these pupils the loss of hearing connected with this disease must be attributed to its effect upon the brain and the nervous system, rather than to its eruptive character. Consequently, in these notes I have counted it among the eruptive fevers. It seems to have been very violent in its nature, and very disastrous in its effects, which were frequently fatal. Two of our boys lost each an eye from the same cause; and two were so prostrated that they did not recover their strength for a year or more. Indeed one of them could not walk steadily for several weeks after entering the school in 1866, and even now is delicate in appearance and far from strong.

Classifying the families to which these pupils belong, we find the following facts:

188 families have 1 deaf-mute each;
18 families have 2 deaf-mutes each;
4 families have 3 deaf-mutes each;
3 families have 4 deaf-mutes each;
2 families have 5 deaf-mutes each;

Of the one hundred and eighty-eight found singly in their respective families, 45 appear to be congenital deaf-mutes, and 129 are accidental cases. As to the rest, the causes of deafness are unknown or unreported.

In the eighteen families having two deaf-mutes each, both members were born deaf in 13 of the couplets; both members lost their hearing by disease or by accident in four of the couplets; and in one couplet one member is a congenital and the other an accidental case.

In the four families with three deaf-mutes in each, all were born deaf excepting two sisters as to whom the facts are not known to me at present.

In the three families showing four deaf-mutes in each, all were born deaf in two families, and all but one in the third.

In the two families having five deaf-mutes in each, three in one family and one in the other were born deaf; and the rest (six out of ten) are accidental cases.

The readers of the ANNALS may be interested in some further facts respecting a part of these families; those in which the deaf-mutes are most numerous.

1. *The Dixon family.*—There have been four deaf-mute sons, all born deaf. In this family there have been eight children, all boys except the youngest. The second, third, sixth and seventh were born deaf. The parents are English people, but in no way related to each other.

Mr. D. had a second cousin (collateral on the mother's side), who was deaf and dumb, but the cause of deafness is unknown.

2. *The Taylor family.*—In this family, of six children, two sons and one daughter were born deaf, and one son lost his hearing when three years old. The parents were first cousins, and lived in New Brunswick, where all the children were born.

3. *The Webb family.*—One son and three daughters (all the children) were born deaf. The parents were not related, nor are there any collateral deaf-mutes, so far as known. There seems to be no assignable cause for this remarkable tendency to deaf-dumbness in this family.

Two of the daughters are married, one to a speaking man, and one to a deaf-mute. They have each one child, and both the children hear well.

The Huston family.—There have been ten children in this family; of whom the third and eighth lost their hearing by disease, while the sixth, ninth and tenth were born deaf. It will be observed that just half of this family is afflicted with deafness, and that of the younger half only one escaped. Mr. Huston's grandmothers were sisters, and the grandfather and grandmother of this family were first cousins. Mr. Huston's brothers, like himself, were healthy and long-lived; but, like him, they all became deaf, or at least hard of hearing, comparatively early in life. The consanguinity of the grandparents may be a sufficient explanation of this tendency to early deafness in the whole family, and to deaf-dumbness in this particular branch.

5. *The Lurber family.*—This is the only family represented in our institution, in which either parent is deaf and dumb. The father is a deaf-mute, without education, who came to Iowa from Indiana; where there are, or have been, several deaf-mute relatives. Of twelve children in this family only one, and she the eighth, was born deaf. Four others, the fourth, fifth, sixth and ninth have lost their hearing in whole or in part, and have been sent to school here. One of them, however, hears and speaks quite well, and the other speaks considerably, though she hears only a very little, and with but one ear.

Fifteen of our 245 pupils report deaf and dumb relatives, aside from the connections mentioned in the above notes; and in four of the families represented the parents were related.

Twenty-nine of our former pupils have been married (seven of them to speaking partners), making twenty-two couples. They have reported thirty-one children; and, so far as known, all of the children can hear and speak.

A part of the calculations in these notes may be founded on too small a number of cases to be very valuable, in any broad and comprehensive survey of the causes of deafness. Of that each reader must judge for himself. They are submitted to the Annals, in the hope that they may call forth similar facts and figures now locked up in the registers of our various institutions; that so the statistics connected with out profession may be more widely known.

INSTITUTION REPORTS.

The New York Institution has issued its fifty-first annual report, which states that at the end of the year 1869 there were under instruction 536 pupils, "the greatest number ever collected at one time in this or any other institution for the education of the deaf and dumb." This number, added to that of those previously taught, makes the whole number who have received the benefits of that noble school 2,088.

The following item respecting the financial condition of the Institution will be read with pleasure by all its friends, especially by those who have known of the embarrassment which its large debt has caused.

"Of the thirty-seven and a-half acres, nine and a-half have been disposed of under contract of sale, which, when consummated, will yield the sum of $262,272. This will relieve the Institution of its mortgage debt of $175,000, and bear a fund of $87,279, to enable it to take advantage of the market in purchasing for cash, and to make such additions to the building as may, from time to time become necessary. The remaining twenty acres will be ample for the purposes of the Institution, and may be regarded as constituting a secure endowment for the future."

Prof. Englesman, the former Principal of the "Institution for the Improved Instruction of Deaf Mutes" in New York, has been secured as teacher of articulation,

and the recommendations of the Conference of Principals of 1868 seem likely to have full trial.

The very appreciative remarks of Dr. F. A. P. Barnard, chairman of the Committee on Examinations, at the close of the report on the annual examination of last June, respecting the magnitude of the task of instructing the deaf and dumb, on account of low state of development of the pupils at the commencement of their course, and the complex structure of language to their minds, we should be glad to quote in full if we had space.

The Pennsylvania Institution reports one hundred and eighty-six pupils, of whom 151 are supported by the State of Pennsylvania, 11 by the State of New Jersey, 4 by the State of Delaware, 2 by scholarships, and 18 by the Institution or their friends.

The Board of Directors state that a committee, consisting of members of the Board and of one of the experienced teachers, was recently sent to examine the schools where articulation is taught in Massachusetts, Connecticut and New York. This committee reached the conclusion that "the education of deaf mutes is far more general, more thorough, more accurate, and less expensive by signs than by lip reading, and that very few succeed in holding a conversation of any length by the reading of the lips; but inasmuch as some of the semi-mute and semi-deaf pupils may derive advantage by more systematic instruction in articulation, than that hitherto adopted, they recommend the employment of a well-qualified teacher for that purpose."

Mr. Hutton pays an interesting tribute to the memory of Mr. Clerc, recalling his connection with the Pennsylvania Institution and his influence upon the education of the deaf and dumb in this country.

The Ohio Institution issues its forty-third annual report this year. The number of pupils in attendance at the beginning of the year was two hundred and sixty-six. The whole number admitted since the establishment of the Institution has been 1,113.

The High Class, consists of nineteen pupils, the class of semi-mutes in articulation of thirty-one. This latter class is said to make considerable progress, but very soon to gain a knowledge of signs and prefer to use them instead of speech, which they have previously employed.

The organization of the High Class is referred to as manifesting its good results at once by furnishing two competent teachers within the year from its graduates.

The industrial department is working with great efficiency; from twenty to forty of the girls are employed in the book-bindery, and all the boys—one hundred and fifty—work either in the printing office, the book-bindery or the shoe shop. The book-bindery and printing office are under the immediate direction of the Supervisor of Public Printing. Two and a-half hours each day are spent by the pupils in manual labor.

The following interesting tables are furnished by the Superintendent:

1st. The cause of deafness in 1,113 cases:

Not reported	28	Meningitis	6
Reported unknown	95	Rickets	5
Congenital	383	Erysipelas	5
Scarlet fever	115	Small-pox	3
Brain "	55	Scrofula	4
Typhoid "	15	Paralysis	3
Spotted "	9	Diptheria	3
Bilious "	4	Quinine	4
Congestive fever	2	Ague	3
Catarrhal "	1	Croup	3
Typhus "	2	Mumps	2
Lung "	2	White swelling	2
Yellow "	1	Chicken pox	2
Fever	45	Worms	2
Sickness	98	Dysentery	2
Sores in head	69	Neuralgia	1
Measles	34	Rheumatism	1
Cold	31	Bronchitis	1
Fits	19	Calomel	1
Whooping cough	19	Cruelty	1
Accidents	15	Gout	1
Hydrocephalus	8	Swimming	1
Teething	7		

2d. The age when deafness occurred in 1,113 cases:

Age not reported	230
Congenital	383
Under 1 year	171
Over 1 " and under 2 years	148
" 2 " " 3 "	56
" 3 " " 4 "	38
" 4 " " 5 "	28
" 5 " " 6 "	15
" 6 " " 7 "	10
" 7 " " 8 "	17
" 8 " " 9 "	7
" 9 " " 10 "	2
" 10 " " 11 "	2
" 11 " " 12 "	2
" 12 " " 13 "	1
" 13 " " 14 "	1
" 16 " " 17 "	1
" 17 " " 18 "	1

The Superintendent calls attention to the fact that a large number of deaf mutes in the State of a suitable age are not in attendance at school, and thinks that not half the deaf mutes are entered upon the legal returns. Of the one hundred and ninety-four pupils received during the past two years, only eighty can be found on the official returns.

A meeting of the Alumni is proposed during the next summer vacation.

This Report contains an engraving of the new institution building, the work of a graduate, which shows the magnificent provision Ohio makes for its deaf mutes.

The Kentucky Institution, in its forty-sixth annual report, announces only seventy-six pupils, and urges the parents of deaf-mutes to take advantage of the privileges which the institution offers. The whole number since the founding of the school in 1823 has been 532.

This report contains obituary sketches of Mr. Jacobs and Mr. Cheek, the principal and vice-principal, who died during the year 1869.

Mr. John A. Jacobs, Jr., a nephew of the former principal, has been appointed principal. He had been connected with the Institution as teacher six or seven years, and part of that time, on account of the feeble health of the principal and vice-principal, had discharged the duties of those officers.

The report furnishes a history of the Institution, from which we make the following extracts:

"The Kentucky Institution for the Deaf and Dumb was established by an act approved January 7, 1823, and went into operation on the 23d of April following. Rev. John R. Kerr and wife were appointed superintendent and matron of the boarding department. The literary department was without any principal or instructor, except an imposter by the name of Irvine; and afterwards, for a short time, under the charge of a young man from New York, DeWitt Clinton Mitchell. Mr. J. A. Jacobs, in the spring of 1824, entered the Institution, and in a short time went to Hartford to obtain a knowledge of deaf-mute instruction. He returned November 20, 1825, and was immediately appointed principal of the literary department by the trustees. By the original act of the General Assembly endowing the Institution, $3,000 was appropriated to aid in its establishment, and one hundred dollars was appropriated to each pupil; the time limited to three years; and the sum to be drawn to $2,500 per annum; and in 1824, an additional sum of $3,000 was given to aid in the erection of suitable buildings. By an act of January 7, 1827, the time was extended to four years. By an act of January 7, 1824, the amount allowed for each pupil was increased to $150, and the number of pupils limited to twenty-five. Upon application of the Institution, by an act of 1836, the annual allowance to each pupil was reduced to $120 per annum, and the time of instruction extended to five years. By two subsequent acts, the number was extended to thirty and thirty-five. By an act of February 21, 1850, the trustees were allowed to select five pupils, of good talents and character, each year, and retain them two years, and an annual appropriation of $200 made for clothing of the indigent. By an act of the same year, all limitation was removed as to the number, and all the mutes of the state of proper age were allowed to be received. By an act of January 7, 1852, the sum allowed for each pupil was increased to $140, per annum; and by an act of February 18, 1858, the fifth and sixth sections of an act for the benefit of the Institution for the Blind, approved January 7, 1852, were applied to the Institution, whereby any pupil entering under the age of thirteen, might remain until the age of twenty-one. In 1852, $3,000 was appropriated by the Legislature for the support of the Institution; and owing to the great appreciation in the prices of all the necessa-

ries of life, during and since the close of the war, an additional sum of $3,000 was appropriated in 1865; so that now $6,000—the appropriation spoken of, $140 for each pupil, and $200 for clothing—is the present annual expense to the state of this great charity. A number of years since, through the exertions of Hon. Thomas P. Moore, then the representative in the Congress of the United States from the congressional district in which the Institution is situated, a grant was made by Congress of a township of land in Florida, which, under the wise and prudent management of the sales, has been of great benefit to the Institution. From the proceeds of the sales of this land, the comparatively small appropriation of the state, and donations of Mr. Jacobs himself, the present commodious and handsome buildings of the Institution have been erected, and its grounds of fifty acres or more have been purchased, and a permanent fund accumulated belonging to the Institution of between $25,000 and $30,000.

The Institution was first taught in an old frame building on Main street, in Danville. Under the wise and economical management of the late principal, at the cost to the state of an astonishingly trifling sum, its present grounds have been purchased and buildings erected. The buildings are four in number. The principal building is one hundred and seven feet in length, sixty-four in width, with four stories above the basement, and in the Italian style of architecture, with a metallic roof, built in an elegant and substantial manner. The internal arrangements are such as to secure comfort, convenience, and safety. Besides this there are: a school-house with a portico in Doric order, with a central building two stories high, with two wings one hundred and two feet in length; a chapel fifty feet in length and thirty-two in width, with a portico in Ionic style; and a house now occupied by the boys, consisting of a front two and a half stories high, fifty-two feet in depth, fifty-one feet in length, and an ell two and a half stories high, besides all necessary buildings for servants, etc. Governor Magoffin, in his message to the General Assembly in December, 1859, recommending an additional appropriation of $10-,000 for the completion of buildings, etc., says: 'From a small and doubtful beginning, under the management of one of the most competent, devoted, and philanthropic of men, it has grown into the most successful and interesting institution in the country. Under his unceas-

ing care it has been a blessing to the afflicted inmates and an honor to the state. * * There are four buildings which have cost about $60,000, when all that has been appropriated by the Legislature within thirty years, at different times, is $17,500 in building purposes. We may add, this light cost to the state was not only the result of the economical and prudent management of the principal, but also of donations from his private means to the erection of every one of the buildings, and from funds saved to the Institution for this and other purposes, by the payment, out of his own pocket, for a time at least, of portions of the salaries of several of the teachers in the Institution."

"In the year 1835, both the Literary and Boarding Departments of the Institution were united under the control and management of Mr. Jacobs; and many years the profits of the boarding department were the private emolument of the Superintendent. In the year 1854, against the wishes of the Board of Trustees, but at his urgent solicitation, this large benefit from the boarding department, then annually increasing, was relinquished by Mr. Jacobs and received by the Institution itself. Instead thereof, he received a salary of $1,000, and board of himself and family, and now, for some years, the board only of himself. By this arrangement, from fifteen hundred to twenty-five hundred dollars has annually been saved to the Institution. At the same time Mr. Jacobs gave to the Institution the furniture, cows, &c., then his private property. This action not only shows his disinterested benevolence and self-sacrificing love for the Institution, but his wisdom as to making the Institution ultimately self-supporting, and removing all temptation to the selfish desire for the control of this Institution as a place for the accumulation of a fortune."

"One of the marked features in the management of the Institution has been careful and prudent economy. We need but refer to the reports made to each session of the Legislature of the expenses, to show that probably no institution was ever brought to such a flourishing condition with so small an expenditure of money. Never has a more faithful and rigid account been given of the funds of any institution."

"Who can tell the self-denying labor, the love, the faith, the anxious cares and mental struggles of him to whom the overwhelming part of the prosperity and success of this great charity is due? For almost an half of

a century he labored in and watched over it in all its interests, giving to it the energy of his youth, the strength of his manhood, and the wisdom of his mature age, with a singleness of heart and devotion with few parallels and no superiors. We might say of him as did our Lord of Nathaniel, 'Behold an Israelite indeed, in whom there is no guile.' He gave to it his talents, his time, his most earnest prayers, and finally his life; for at last, when 'the silver cord was loosed and the golden bowl broken,' he died a victim to his too anxious care for its welfare and prosperity, But his benevolence was not narrowed to this charity, great as it was; but the sorrows of all earth's afflicted children touched a sympathetic cord of his heart, and called forth active, intelligent and laborious efforts for their relief. The Institution for the Feeble-Minded is due, in a great measure, to his earnest labors. If we mistake not he drafted the bill establishing it. Truly he might have said, '*homo sum; humani nihil a me alienum puto.*'"

We had intended to notice the report of several other Institutions—the Wisconsin, Iowa, Texas, Columbia, Alabama, Minnesota, Maryland, Institution for Improved Instruction (N. Y.,) Northern Counties (England,) and Inspector of Asylums (Province of Ontario, Canada,) which are all before us, but have devoted the space intended for that purpose to the extracts from the historical sketch of the Kentucky Institution. We have done this for two reasons, because the late Principal had expressed the desire that a historical sketch of that Institution should appear in the *Annals;* and also because this sketch pays a merited tribute to his memory.

MISCELLANEOUS.

The following letter has been received from the chairman of the committee appointed to make arrangements for the Convention to be held this year:

NEW YORK, April 13th, 1870.

DEAR SIR:—At the National Conference of Principals of institutions for the deaf and dumb, held at Washing-

ton, May 12—16, 1868, the following resolution was adopted. (Proceedings, p. 149):

"*Resolved*, That in the opinion of this Conference there should be held from time to time general conventions of all persons engaged in the education of the deaf and dumb, and that Mr. I. L. Peet, of New York, Dr. Jos. H. Johnson, of Alabama, Rev. Collins Stone, of Connecticut, Dr. H. W. Milligan, of Wisconsin, and W. O. Connor, of Georgia, be appointed a committee to make arrangements for such convention, either in the year 1869 or 1870, and to issue a call for the same, inviting all teachers of deaf mutes, and principals and trustees of institutions, to assemble, without regard to the method or system they may use in their labors."

This committee have received from Thomas MacIntyre, Principal of the Indiana Institution, a letter, from which the following is an extract:

"At a meeting of the Board of Trustees of this Institution, held this day (April 7th), the following action was had with reference to the meeting of instructors for the deaf and dumb:

"*Resolved*, That the Board of Trustees of this Institution, in view of the near approach of the time for the assembling of the National Convention of Instructors of the Deaf and Dumb, and believing that Indianapolis would be a most central, convenient and suitable place for the assembling of such convention, do hereby extend a cordial invitation to the committee to hold the said meeting in this Institution, at such time in the month of August as shall, on consultation, be thought best.

"*Resolved*, That our Superintendent is hereby empowered and requested, should the invitation be accepted, to tender the hospitalities of the Institution to the members of the Convention, and to make such other arrangements as may be necessary to secure them a pleasant and profitable meeting."

After due deliberation the committee have accepted this invitation, and now give notice that the Convention will be held at the Institution for the Deaf and Dumb, at Indianapolis, on Wednesday, the 24th of August, 1870.

Mr. MacIntyre has kindly consented to act as local committee of arrangements, and to him all letters of inquiry should be addressed.

In behalf of the committee,

ISAAC LEWIS PEET,
Chairman.

DIED.

In Philadelphia, February 26, Robert T. Evans, M.D. Dr. Evans had been a faithful and successful teacher in the Pennsylvania Institution over thirty years, and had endeared himself to many friends and pupils, by his refinement and delicacy, and his high-toned Christian character.

In Halifax, Nova Scotia, February 24, Mr. George Hutton, in the 70th year of his age. Mr. Hutton was father of Mr. J. Scott Hutton, Principal of the Halifax Institution, and had himself spent between forty and fifty years in teaching deaf mutes. His article in the July (1869) Annals will be remembered by our readers. We hear of him as an earnest worker, a judicious counsellor, and a devoted Christian.

With the present number, my work as editor of the *Annals*, ceases. I take this opportunity to render thanks to my former co-laborers for their uniform courtesy, and especially for their ready assistance in the labor of the past two years, and also to express my best wishes for their continued prosperity and success in the noble work in which they are engaged.

It gives me much gratification to announce that the *Annals* will hereafter be under the editorial care of Prof. Edward A. Fay, of the National Deaf Mute College, Washington, D. C.

LEWELLYN PRATT.